Representations of Gendered Violence After the "Anti-feminist Attack" at the École Polytechnique

Dr. Richard A House, Rose-Hulman Institute of Technology

Richard A. House is Professor of English and Associate Dean for Professional Development at Rose-Hulman Institute of Technology, where he directs the Center for the Practice and Scholarship of Education. He received a B.A. from Illinois Wesleyan University and M.A. and Ph.D. from the University of California, Irvine. His interests include liberal education for engineers, engineering communication, and science, technology, and society (STS).

Jessica Livingston, Rose-Hulman Institute of Technology

Jessica Livingston is an associate professor of English at Rose-Hulman Institute of Technology. She received a B.A. from the University of Georgia, an M.A. from the University of Kentucky, and a Ph.D. from the University of Florida. Her areas of interest include engineering communication and pedagogy, the intersections of gender and work in a global economy, and documentary film.

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Abstract

On December 6, 1989, the École Polytechnique de Montréal was the site of the deadliest mass shooting in Canadian history. Fourteen women were killed before the shooter took his own life; another ten women and four men survived their injuries. The shooter's suicide note indicated unequivocally his misogynist, antifeminist motives; his statements during the attack confirmed that he selected women pursuing engineering degrees as targets precisely for inhabiting spaces and claiming prerogatives that had belonged to men.

Donna Riley and Gina-Louise Sciarra (2006) situated the Montreal Massacre in engineering education scholarship as an "engineering disaster"—a category normally of bridge collapses and space shuttle explosions, here invoked to illustrate that community norms and values within the engineering profession can inform life-and-death material stakes as easily as do more frequently invoked technical considerations. Further demonstrating the necessity of *sociotechnical* education, Riley and Sciarra's case study demonstrates that women in engineering education can benefit from opportunities to grapple with historical legacies relevant to their own experiences and career aims.

In this paper, we analyze film representations of the École massacre from the early documentary *After the Montréal Massacre* (Rogers 1990) to Denis Villeneuve's 2009 feature dramatization *Polytechnique*. We do not find that filmmakers over time have arrived at more comprehensive accounts of the tragedy or keener diagnoses of its causes. Instead, each telling becomes further removed from the initial feminist understanding of the events expressed in *After the Montréal Massacre*, which foregrounds the political nature and the systemic scope of violence against women. A decade later, *Legacy of Pain* (Pelletier 1999) documents the abuse of the shooter's mother by his father, but the account is more psychoanalytic than political; misogyny matters chiefly in the logic of attributing adult violence to childhood trauma. Finally, *Polytechnique* overtly connects misogynist terrorism with garden variety workplace sexism, which appears in hindsight as an obstacle over which the protagonist prevails on her way to career success; critics continue to deliberate whether this treatment is adequate to the gravity of the historical events.

We approach this painful historical memory through narrative film with two motivations. First, such narratives shape students' aspirations and their attribution of meaning to their own careers. Awareness of the historical events of December 1989 is itself important, but the competing interpretations of the events give students an occasion to experience the challenges of resolving those events' meaning. Second, the experience of narrative is a primary means for the development of empathy, a crucial outcome for engineering education and for imagining and realizing more just futures within it.

Introduction

On December 6, 1989, fourteen women lost their lives in a mass shooting--thirteen students as they attempted to complete their courses for the term and one woman who worked as a budget clerk. In a classroom and cafeteria of École Polytechnique de Montréal, Geneviève Bergeron, Hélène Colgan, Nathalie Croteau, Barbara Daigneault, Anne-Marie Edward, Maud Haviernick, Barbara Klucznik-Widajewicz, Maryse Laganière, Maryse Leclair, Anne-Marie Lemay, Sonia Pelletier, Michèle Richard, Annie St-Arneault, and Annie Turcotte were murdered; another ten women and four men were injured. Many of the women were targeted for pursuing an engineering degree, but after the initial murders in the engineering classroom, Barbara Klucznik-Widajewicz, a nursing student, and Maryse Laganière, a budget clerk in the university's finance department, were also murdered for being women.

Twenty-five-year-old gunman Marc Lépine—an aspiring engineering student who had first applied to the École in 1986—made statements during the attack and in his suicide note indicating unequivocally his misogynist, antifeminist motives. He entered the classroom with a semi-automatic weapon and ordered the men to leave before opening fire on the women. In his suicide note, he blamed feminists for ruining his life, and before he opened fire, he called the women feminists. Some of them protested, "We're not feminists, we're girls who like science," and "we're just women studying engineering, and we've never fought against men" [1].

Donna Riley and Gina-Louise Sciarra brought the shootings into the engineering education literature in 2006, observing that they had to date been taught in social science courses but not in engineering—a textbook case of what science, technology, and society scholars call technical-social dualism [2]. That is, even as catastrophic a social development as a mass murder in an engineering college had largely been bracketed out of engineering education proper. How, after all, does one address such subjective, felt horrors within a discourse that takes pains to remain "objective and asocial" and apolitical? [3]

The murdered women's protests themselves show a version of "the perceived conflict between gender and professional identities" diagnosed by Riley and Sciarra [2]. Indeed, as many scholars have noted, the assumptions of engineering epistemology depend precisely on the premise that engineers' subjective identities and perspectives can be effaced from the problems and solutions that define their work. In typical practice, such considerations (if raised at all) are footnoted as contextual factors ultimately filtered out of the "strict five-step sequence" of engineering science identified by Downey and Lucena: "Given, Find, Equations, Diagram, Solution" [4].

Riley and Sciarra disrupt technical-social dualism (in a thermodynamics course, no less!) by framing the Montreal Massacre as "an engineering disaster," belonging to one of the few educational genres in which personal agency and social stakes are emphasized over material properties and strains and stresses. This is normally done by investigating engineers' roles in the failure of technical systems such as the space shuttles Challenger and Columbia or the Tacoma

Narrows Bridge. Putting the École shootings into this category is both insightful and subversive: the failure of a bridge or a spacecraft can in principle be traced to errors or omissions in "strict five-step sequence" problem-solving. The causes and solutions for terrorist violence like the École murders, on the other hand, are irreducibly and uncomfortably social.

We revisit this event and this argument partly to commemorate the loss of the Polytechnique women while our society meets in Montreal, but also because antifeminism and misogyny remain distressingly relevant to engineering students and other young people today. Riley and Sciarra's 2006 account of a conversation among engineering students at a women's college gives indications of progress. These students, like their 1989 counterparts in Montreal, are sometimes uncomfortable with the implication that their pursuit of engineering degrees and professions implicates them in a political project like feminism. They, however, are at least grappling with such questions as part of their engineering studies. Of course, such critical awareness and intervention on the part of educators has subsequently faced intense backlash, especially in the online "manosphere," which has produced its own antifeminist terrorists. Thus, as we have studied the horrors wrought by Marc Lépine, he has seemed to us in many ways familiar—perhaps horribly ahead of his time.

This paper analyzes three films, produced approximately a decade apart—the 1990 documentary *After the Montréal Massacre* [5], 1999's *Investigating the Montreal Massacre: Legacy of Pain* [6], and Denis Villeneuve's 2009 feature dramatization *Polytechnique* [7]. In our classrooms, these films may have the potential to reach students who might otherwise see questions of gender equity as obsolete or oversensitive. Moreover, they provide a record of how the murders and their underlying sentiments and intentions have been interpreted. The killing of these women is a fact of engineering education history that we should all know—but its contested meaning and significance, reflected in these narratives, are likewise critical.

Contested meaning and a legacy of antifeminism

The attack on the École Polytechnique women was not the first mass shooting at a university. Until the 1980s, the deadliest such attack in North America had been the 1966 shootings from the Main Building tower at the University of Texas at Austin. The UT shootings resembled those at Polytechnique in many particulars, from the number of fatalities (15 in Austin and 14 in Montreal) to the abusive fathers of both perpetrators. In Montreal, though, both the testimony of the survivors and Lépine's written statement emphasized his antifeminist motives. Feminist scholars and commentators of the era thus took great pains to emphasize that the shocking, singular violent episode was actually symptomatic of larger patterns of violence against women, different more in degree than in kind. In 1994, Jennifer Scanlon, summarizing the consensus of second-generation feminism's accounts of the killings, called Marc Lépine "part of a continuum, not removed from society but part and parcel of our woman hating" [8].

This point seems obvious in hindsight, and it was also evident at least in some of the initial media coverage and the official statements of political figures. *Le Journal de Québec*'s headline was "*14 morts, toutes des femmes*" (14 dead, all women) [1]. The Mayor of Montréal, Jean Doré, recognized the misogyny of the crime, and he shed tears of grief when talking to the press [1].

Parti Québécois politician and essayist Pierre Bourgault called it "the first acknowledged sexist crime" and a "collective crime against women" [1]. And *Le Devoir* editorial writer Jean Claude Leclerc pointed out that "The young killer [...]wasn't against women in general (he didn't kill nurses or restaurant waitresses), but against those who embodied new women carving a place for themselves in a still very male world. The message was clear. Few feminists were duped. The attack was on women's liberation" [1].

At the same time, however, there was a disbelief or refusal to see that women were targeted, according to the authoritative account of the massacre and the aftermath by journalist Josée Boileau [1]. Some male government officials offered condolences to the families of the 'étudiants' (the *masculine* form of the word 'student'). The National Assembly condemned the tragedy with "talk about 'victims,' 'youth,' 'loved ones,' but the words 'women' or 'girls' were never uttered" [1]. Most significantly, commentators downplayed feminist accounts, suggesting that the killer's fixation on women was secondary to his presumed mental illness. As Scanlon paraphrases this dismissal, "The killer was crazy… his actions had nothing to do with women and everything to do with his psychosis" [8]. A significant number of articles about Lépine's childhood, abusive father, and mental state helped this "crazy shooter" narrative gain traction. The assertion that women couldn't be engineers had to be an irrelevant fixation of a mentally ill individual, lest it be recognized as a symptom that justified continuing feminist critiques. Sexologist and writer Jocelyne Robert recalls that when she appeared on a radio show to discuss the crime, "I was the only one pointing out that everything indicated we were dealing with the extreme and murderous expression of a hatred of women, a refusal of gender equality […] the other guests were looking at me like I was crazy" [1].

Lépine's attack also emboldened antifeminists to become more vocal. On the evening of the attack, some men agreed with Lépine's criticism of women's liberation and vocally approved of him [1]. Nathalie Provost, one of the survivors in the classroom, heard men on the radio saying that Lépine did a good thing [1]. In 1990 several copycat attempts took place [1]. Even in 2009, violent rhetoric on blogs compelled Université du Québec à Montréal to increase security for a conference in response to the 20th anniversary of the massacre.

Only ten years later than that, on the 30th anniversary, did the city of Montreal officially adopt the perspective, expressed by feminists immediately in 1989, that the massacre exemplified systemic violence against women, updating the plaque at the memorial park to acknowledge "an anti-feminist attack" rather than a more general "tragedy." Antifeminism is an ideological pillar of many forms of right-wing terrorism, and its persistence is especially worrying. Indeed, the École Polytechnique massacre today resonates because motives and actions like Lépine's remain current and widespread. For instance, the 2014 murders at UC Santa Barbara were also framed as revenge against women perceived to have wronged the shooter [9]; even harassment campaigns like Gamergate are categorized as gender-based violence [10] [11]. French historian Christine Bard is right, then, to call Lépine a "pioneer of masculinist terrorism" [1].

If the shootings on December 6 resemble subsequent acts of antifeminist violence or stochastic terrorism, so too does the "postfeminist" dismissal that such acts are irrational and vestigial: they

exist only in peculiar margins, while the larger culture has achieved egalitarian justice or even pushed too far. Where mental illness provides a sufficient causal explanation, the ideological component of the violence can be reduced to an incidental pretext. (This reasoning resembles the argument in the U.S. against gun control legislation as a countermeasure to prevent mass shootings: the shooter's mental health is treated as the root cause and thus the only presumably apolitical one. In this telling, social critics—feminists or critics of gun culture—are the ones introducing political content to the crisis, regardless of the declared intention of the assailant.)

Mass violence and hegemonic masculinity

Thirty-five years later, Lépine's words and his actions are distressingly familiar—more contemporary than outdated. Mass shootings are of course a good deal more common, but so are antifeminist screeds like the one Lépine left to explain himself. Hostile resistance to feminism online now defines a discursive environment—the so-called "manosphere"—with which disillusioned men identify. And if these spaces are most often limited to rhetorical violence against women, literal violence has not only emerged from them but has been encouraged. Elliot Rodger murdered six people near the campus of the University of California, Santa Barbara—having intended to kill everyone in a sorority house that he was ultimately unable to enter. Rodger's actions culminated his long involvement in "incel" ideology—the communal sexual frustration of "involuntary celibates"—and still gains online praise from admirers in that community. While Rodger was aggrieved at a lack of sex and romance and Lépine at perceived professional displacement, both wrote that feminism was the cause of their suffering [12].

The beliefs and objectives declared by Lépine and collectively adopted by online "manosphere" communities evince the *hegemonic masculinity* proposed by sociologists of gender. Yasmine Issa, who theorizes hegemonic masculinity as the link between mass shootings and violence toward women more generally, defines it as follows:

> Conceived of by the sociologist R.W. Connell, the hegemonic masculinity framework describes the socially constructed criteria that define who is and is not a "real" man. Hegemonic masculinity is characterized by power, authority, and physical strength, as well as competitiveness, self-reliance, and stoicism. The characteristics central to hegemonic masculinity are learned from an early age and reinforced throughout adolescence and adulthood. Hegemonic masculinity thus informs normative male behavior. These behaviors create a patriarchal system that marginalizes and subordinates women. This toxic construction of masculinity is hegemonic not only in relation to women, however, but also in relation to other men. Hegemonic masculinity collaborates with racism, homophobia, classism, and other forms of prejudice to guarantee the dominance of a particular construction of masculinity over others. [13]

Elliot Rodger's violence sought not only to punish women for denying him sexually but also to vault him into higher tiers of masculine status above rivals he saw as unworthy. Marc Lépine spared men's lives, but certainly exerted power over them as well. Indeed, hegemonic masculinity can help to account for the trauma of the men present at the Polytechnique on December 6, 1989, experienced partly through their own sense of their masculinity. Sarto Blais

died by suicide eight months later, leaving a note expressing his guilt at not having intervened to protect the women [14]. Rolando Rifiorati reported the need for male survivors to defend themselves for not having fought. "I don't think it's possible for university engineering students to have the reaction to actually jump on a guy who's shooting all over the place," he told *The Canadian Press*, invoking the normative ideal of physical courage in the face of danger in reporting what he experienced in 1989 [15].

Antifeminist ideology in engineering and technology

In the 1980s a cultural backlash emerged in response to the advances that feminism had achieved in the 1960s and 1970s [16]--the complaint that the 1980s had been a "'postfeminist' decade" that had advanced gender equity as far as it needed to go [17]. In the current backlash, that complaint has resurfaced in the broadside attacks on "DEI" or "woke" culture. Engineering and technology are perhaps especially fertile ground for this stance due to the firm entrenchment of *social-technical dualism*, which foundationally relegates concerns of justice and equity to secondary concerns. Indeed, they may be treated as distractions or impediments. And within social-technical dualism, it is frequently possible to dismiss concerns like these with recourse to a *reductionism* in which social practices are attributed to an unchanging, biologically determined human nature. Perhaps most famously, Google software engineer James Damore characterized his employer's diversity initiatives as "authoritarian," appealing to research in evolutionary psychology to explain the small proportion of women in tech as the result of their essentially hard-coded personality traits and interests. Insofar as gender differences can be resolved by technical, positivist research findings, Damore suggested, promotion of equity becomes a source of bias.

Hegemonic masculinity, while served by belief in pervasive, essential gender differences, is not reducible to such a set of empirical claims and thus to disciplinary epistemology. Indeed, its affective and behavioral components are often much more striking. Engineering and computer science have been characterized as culturally vulnerable on these fronts, given their exposure to radicalizing online communities: "STEM fields…share workplace and recreational proximity to online subcultures including video gaming and 'nerd-dom' which similarly present barriers to those not within a white, cis male, heterosexual norm [18]… online gaming/tech/nerd communities [celebrate] white 'geek' identity and the militarized straight cis masculinity represented in popular video game media" [19] [20]. These communities recruit initiates into formally constituted white supremacist groups and informal misogynist groups of the so-called "manosphere." And celebrity corporate leaders in industries that employ engineering graduates have identified, ever more explicitly, with these groups: Elon Musk's social media posts veer between gaming content and far-right politics, and Mark Zuckerberg invokes a desire for "masculine energy" in discussing the elimination of Meta's diversity and inclusion offices [21].

While Lépine's pursuit of engineering credentials was unsuccessful, his rampage can be seen in light of research about the connection between engineers and extremist violence. Gambetta and Hertog "conjecture that engineering as a degree might be relatively more attractive to individuals seeking cognitive "closure" and clear-cut answers... Engineering is a subject in which individuals with a dislike for ambiguity might feel comfortable" [22]. They find that engineers as a rule are

active in disproportionate (though still small) numbers only in right-wing terrorism, pursuing "radical change only if this is aimed at establishing a strong, hierarchical social order" [22].

Subsequent research has extended beyond allegiance to radical groups and suggested that even among ordinary students and practitioners, engineering "education may leave violent ideologies unchallenged or actually reinforce violent and fundamentalist mindsets" [23]. Technical problem-solving divorced from social concerns may leave prejudices unquestioned; militarism may even appear as a seemingly natural part of an engineering worldview [23] [24]. After all, some level of belief in justified violence enables "the long‑standing role of engineers as hired guns for the military‑industrial complex" [23].

What Banks and Lachney call "the neutrality problem"—identifying engineering only with apolitical knowledge—also prompts mistrust of social reform efforts in areas like diversity and inclusion. Reporting backlash against a survey about the experiences of transgender students in undergraduate engineering and computer science, Andrea Haverkamp and her colleagues catalog fifty malicious entries in which respondents mock questions of identity, often with "slurs and hate speech" and meme-inspired gestures such as claiming to identify as an "attack helicopter" [25]. In quoting one "relatively kind" objection, though, they uncover the conviction that the survey itself is the instrument of prejudice and discrimination: "In today's world people can be what they want to be regardless of their gender or race, all you're doing is propagating a stereotype and pushing a divide between groups" [25].

Addressing such perceptions, of course, is one of the key reasons to interpret and to teach historical events like the Polytechnique shootings, and a necessary step in doing so is to muster available empirical evidence that such events are not merely anomalous but symptomatic, and that engineering values and even technologies themselves are deeply political, including in gendered and racialized ways [3].

Beyond the empirical, though, this enterprise is also narrative and affective–as, of course, are engineers' and engineering students' understandings of their own profession. Students' cognitive awareness of the historical event alone cannot determine their interpretation of its meaning or its contemporary resonance. Here, it may matter that the shootings are more historically remote than they were for Riley's students in 2006. That increased remoteness makes it easier to relegate them to a past imagined to be irrelevant. Engaging the Montreal Massacre through films, rather than solely through historiographic accounts, thus has several advantages. These films offer, on the one hand, greater immediacy and emotional impact, as students become spectators to the tragedy's aftermath and even to its reenacted occurrence. They thus induce *empathy*, a skill or disposition now recognized as crucial for engineering, with much scholarship dedicated to its deliberate development in our students [26] [27] [28]. At the same time, students and instructors must engage critically with the complexity of the film medium and its shaping of the content. Film scholars recognize not only that empathy is induced in cinematic experience, but also that its emergence and quality are shaped by filmmakers, in narrative but also visual decisions: for instance, characters reliably draw viewer empathy if developed by point-of-view shots and close-up reaction shots [29].

Such critical attention to form requires special emphasis when viewing (or teaching with) documentary films and dramatic features with a historical basis. While sometimes the choice of form makes a pretense of neutrality, film is never neutral. It reflects a series of rhetorical and cinematic choices. Retelling the events of the Montreal Massacre requires grappling with the question of how to commemorate the victims and the survivors without sensationalizing the murders or increasing the notoriety of the gunman. It also forces a reckoning with the larger purpose of telling the story, and in doing so potentially causing survivors to revisit or re-experience trauma. Filmmakers also have to consider what they represent visually as well as what form their narrative takes. These considerations are integral to what meaning their films impart to viewers–such as our students–and central to our analyses of two documentaries and one fictional dramatization, each from a different political moment a decade apart.

After the Montreal Massacre (1990)

After the Montréal Massacre embraces subjectivity in the documentary form. Documentaries are representations of reality drawing upon both non-fiction models and cinematic modes, and some modes prioritize subjective knowledge and expressiveness [30]. *After the Montréal Massacre* centers the voices of survivors and feminists and their interpretation of the event, beginning with survivor Sylvie Gagnon's personal account of her aspirations that led her to the Polytechnique, followed by what she experienced the night of the massacre. Journalists appear not as authoritative experts or neutral hosts, but as witnesses whose own feminist allegiances have shaped their relationship to the event. To establish the primacy of those viewpoints, the film does not include biographical background or any visual representation of the gunman Lépine, considering him only in regard to the impact and political meaning of his murderous act.

After the first few minutes of Gagnon's account, the documentary shifts from the personal retelling to foregrounding the political nature and the systemic scope of violence against women. When Gagnon states: "For me what happened in the cafeteria was only part of the story," the documentary broadens its framing [5]. Journalist Jack Todd recounts being "hit" immediately by the realization that only women had been killed [5]. The film addresses the public grief, including including images of the 3000 people waiting in the cold to pay their respects to the families of the victims. From conversing with that crowd, the film documentary includes an impromptu debate between a man and a woman in line together as to whether to treat the mass murder as "a reflection of society or an isolated act" [5], foregrounding the interpretive choices required to process such events.

The documentary then enacts its own choice, explicitly connecting the mass shooting to the broader problem of violence against women. Gagnon recalls that she "saw the media take the story and turn it into an isolated case. For me, it wasn't an isolated case. It was the violence I live with every day, that other women live with every day, but an exaggerated violence, a violence pushed to the extreme but with exactly the same intentions, the same form… But all of a sudden, the media was saying that it was isolated, that the guy was crazy, he had a bad childhood. They started looking for reasons to justify a supposedly psychotic act" [5]. Journalist Francine Pelletier further counters the media's psychological rationalizing, adding that "If this was a madman,

never did a madman leave such a lucid and clear message. And that we weren't ready to look at, and I found that almost as disquieting as the act itself" [5].

While she has not appeared onscreen, the filmmaker participates in the documentary through a lengthy voiceover that reinforces the perspective of Gagnon and Pelletier. Rather than an authoritative, detached voice-of-god employed in expository mode, it's a personal, confessional voice:

> It was an event that was so enormous and so unique, that it brought out in women all the little daily acts of violence, the violence that goes on from the time they are little to the time they are grown up. We don't talk about it because it's too small, because that's the way life is. It opened the door on every woman's little sadnesses. I think that the event touched on all the sadness and anger they have always carried around inside like a memory. It's as if a recalled memory, not a revelation, not an awakening. For some women it's something they've always known, but maybe in day-to-day life, they don't always want to see, and it exploded.

The documentary allows for a moment of personal reflection and connection to the experience of sexist violence and then moves from the personal experience to the political realization.

That latter part of the documentary moves outward from Gagnon and the journalists to include more voices on the broader context of violence against women. It includes numerous young unnamed women sharing their realization that they have been harassed because they are women and talking about their fear and the measures they take to prevent being assaulted. A representative from the Montreal Assault Prevention Centre points out that women are taught to fear strangers but often experience violence from someone they know. A speaker provides a global context, listing the extensive range of violence against women, concluding that it is the "leading cause of death of women; the war on women is a civil emergency." In one of the concluding voices, journalist Jack Todd connects the mass shooting to other acts of violence against women, such as domestic violence, sexual harassment, assault and murder, and draws the lesson that society "can't do anything about it until we accept that it's part of a pattern" [5]. Drawing upon the principles of the women's movement and the use of consciousness-raising, the documentary elucidates that the personal is political.

Investigating the Montreal Massacre: *Legacy of Pain* (1999)

Legacy of Pain aired—in advance of the tenth anniversary of the massacre and the opening of the memorial park—on *The Fifth Estate*, a English-language Canadian investigative documentary series that has been broadcast for the past fifty years. As part of a television series, this documentary is structured by genre elements, including a host who conducts interviews and provides a voiceover that guides the narrative. This TV news framing suggests some degree of neutrality or detachment, but this is in turn complicated by the presence of co-host and interviewer Francine Pelletier–also featured in *After The Montreal Massacre*–who had been on Marc Lépine's "hit list" of potential targets. As a television episode, there are three distinct sections, punctuated by commercial breaks.

The program's first section alternates between the solemnity of the subject and the frequent sensationalism of the investigative documentary genre. With melancholy music playing in the background, the documentary begins in the memorial park with Nadine and Sylvie, who lost their sister Maud. It continues with family members remembering their loved ones who were killed—J.-F., who lost his wife of three months; Therese, who lost her daughter, Mimi; and Suzanne, who lost her only daughter, Marie. That elegiac grief, though, then gives way to the style of a true crime documentary. The juxtaposition is abrupt and jarring, confronting the audience with a close-up image and sound of an automatic weapon to introduce the crime's "sheer brutality" [6]. Pelletier narrates the events over images of a reenactment and archival news footage intercut with personal accounts remembered by witnesses, family, and friends. This formal choice moves Lépine to center stage and keeps him there through the middle segment of the documentary.

Prior to beginning the second section, Pelletier declares that the show will be "entering Lépine's mind" [6]. In sharp contrast to *After The Montreal Massacre, Legacy of Pain* documents the abuse of Lépine's mother by his father, Liass Gharbi. The account is more psychoanalytic than political, with the misogyny of Lépine's violent adulthood being traced to his traumatic childhood. The documentary humanizes Lépine, who has been called "a monster," by introducing him with a school photo and childhood friend describing his interests and his parents' backgrounds. In addition, the sister of Lépine's roommate gives Pelletier a tour of Lépine's apartment and talks about Lépine being a "youngster suffering." (A Confederate flag with an image of motorcycle in the center hangs on the wall behind them but is not discussed [6].) That suffering is dramatized by a reenactment of his mother's testimony to his father's physical abuse; the judge from the proceedings then attests to that abuse's severity.

Pelletier attempts to address the misogyny of the violence, asking Elliott Leyton, a social anthropologist and author of a book about mass murderers, about the significance of Lépine killing women specifically. Leyton connects the violence of mass murders to wider conflict:

> [Mass murderers] single out [targets] from the dominant tensions and frustrations in a society and incorporate them into their own thinking–so sometimes it's racist, sometimes… it's sexist. But whatever the tensions prevalent in a society are at that time, they're likely to be reflected in the thinking of these kinds of killers. So this occurred at a time when women were finally breaking loose the shackles that had tied them for 10,000 years… It's not surprising that out of that tension in the general society would come some lone killer who blamed them for everything [6].

But the documentary then seemingly reverts to a psychoanalytic explanation in Pelletier's voiceover narration: "Court documents show that in the Lépine household, Liass Gharbi made sure that his wife would not break from *her* shackles, forcing her to abandon her career and work for him instead" [6]. Again, court records are translated into a reenactment, with an actor playing Monique Lepine testifying to her husband's belief that a wife was "a man's servant" [6]. The documentary then connects the father's abuse to the later murders, suggesting that Lépine followed his father's example: by the time he was twenty, he was posting flyers saying denigrating things about women.

The third section addresses the wider rippling effect of the tragedy but focuses on the personal rather than the political effect of it. For example, it references individuals affected by the night, such as a former mortician, traumatized into changing careers after the young victims were brought to the morgue where he was working. In addition, it tells of several individuals who dealt with depression following the event, and a few who committed suicide. Lépine's sister also died from a drug overdose, and the documentary relates her death alone to Lépine's suicide after the mass shooting. This section begins and ends with grieving the victims, opening with the annual solemn concert to help the public mourn and circling back to the melancholy music as the family members visit the memorial park and grieve their loss. The documentary invites the audience then to share in the communal grief and to commemorate the victims but remains trapped in the grief and pain. Unlike *After the Montreal Massacre*, there is no implicit call to action.

Polytechnique (2009)

As a dramatic feature, *Polytechnique* necessarily confronts the ethics and aesthetics of making art of tragedy—that is, of creating beauty with subject matter that demands revulsion and horror. Villeneuve seems highly aware of the challenge; the victims of December 1989 are commemorated at both the beginning and end of the film. At the outset, a disclaimer insists on the film as fiction, hedging any claim to accuracy or adequacy as historical memory of the event. At the end, the names of the dead are listed, reminding the viewer that the scope of loss well exceeds the handful of composite characters we have been following. These are Valérie, a young woman studying mechanical engineering; Jean-François, a classmate who tries to help during the crisis and who is overcome by guilt in its aftermath; and The Killer.

In not invoking the name of Marc Lépine, Villeneuve seems to follow the practice of many writers on mass killings; refusing to call such a murderer by name typically represents a refusal to grant his desire for posthumous fame. Writers' reticence sometimes extends to the handling of written statements by the killer; no commentator wants to help spread his message. In Lépine's case, however, feminist scholars have long drawn our attention very directly and deliberately to the explicit declaration of war against feminists (and seemingly against all women). The suppression of those words, the reasoning goes, makes it too easy to attribute the atrocity to a mental illness without political import. Thus, Villeneuve has The Killer deliver Lépine's entire statement in voiceover; whether or not the character and the writer can be fully equated, the film is unequivocal in presenting their actions as misogynist terrorism.

Polytechnique also follows feminist accounts of the tragedy (including the documentary films) in connecting murderous misogyny to everyday sexism. After The Killer is introduced with Lépine's words, Valérie's character is established as she confronts her first obstacle, an interview for a mechanical engineering internship. The male hiring manager expresses his surprise that a woman has applied. "Most women go for civil engineering," he explains. "It's easier… uh, easier for raising a family" [7]. While his attachment to traditional gender roles is nowhere near as emphatic or spiteful as The Killer's, the film takes it seriously: Valérie returns to campus with an internship offer, but only after she has run an exhausting gauntlet of gendered expectations. She must alternately perform and disavow femininity as needed—enlisting the help of her flatmate

Stephanie to assemble a professional but attractive outfit of skirt, tights, and high heels, but then having to reassure the hiring manager that she doesn't want children. These demands appear especially absurd given Valérie's capability in her technical coursework: Stephanie comments on her top-notch grades, and the hardworking but stressed-out Jean-François is able to keep up only by borrowing her notes.

Villeneuve implies that Jean-François is a composite character as well, whose representative experiences complement Valérie's so that the complete account includes more perspectives. "We have talked a lot about how this drama has affected women, as we should have, but men were hurt as well. It had a major impact on them… I wanted to explore and illustrate the humiliation and shame that [those] men lived" [14]. However, Jean-François's story—his "humiliation and shame" ultimately drive him to suicide [7] —is recognizably that of Sarto Blais, who graduated from the Polytechnique immediately after December 6 and hanged himself the following summer. Perhaps Villeneuve's most controversial decision is the listing of Blais among the victims in the closing credits, along with the fourteen murdered women.

Compared to *After the Montreal Massacre* and *Legacy of Pain*, there is no mistaking *Polytechnique* for a documentary feature, but commentators emphasize its efforts at verisimilitude. Historian Karen Dubinsky praises Villeneuve's "documentary-like, razor-sharp eye for detail" and vouches for the authenticity of its *mise en scene*: "It looks like a university in 1989: people smoke indoors, familiar '80s music sounds occasionally, students line up to pop dimes in photocopy machines" [31]. This fidelity is observed most strictly in recording the killer's behavior and declared motives. In addition to the antifeminist manifesto in voiceover, survivors' accounts are followed closely in the scene in which The Killer enters a classroom, dismisses the men, and declares to the women his grievances with feminism.

If that interaction amounts to quasi-documentary reenactment, though, the content of the class—which seems to be (too-)introductory thermodynamics—is hard not to understand as allegory. After The Killer's manifesto and Valérie's closing monologue, the instructor's interrupted lecture is likely the longest speech in the film:

> We could define entropy as a measurement of the disorder in a system. Any system that is subject to pressure from its external environment will undergo a conversion that results in imbalance and a transfer of energy. For example, water in a pot on the stove starts to move and change into steam. If we put a lid on the pot, the steam lifts the lid, which falls back down, only to be lifted again and again until there is no more heat or no more water. Now if we put that lid in a cylinder, we get a piston… At the microscopic level, this transfer of energy results in increasing molecular agitation, which we call entropy. Order cannot be restored until maximum entropy is achieved. [7]

"Increasing agitation" takes over in the ensuing minutes, as gunfire sends the entire building into chaos, and fleeing students hurtle down the corridors like the gas molecules in the instructor's examples. The speech seems also to apply to the psyches of the three main characters. Throughout the film, Valérie resembles the piston, with academic and career pressures driving her productive work. Jean-François is more like the boiling water in the heated pot, merely

depleted by his exertions. Even The Killer's motives can be understood in thermodynamic terms. Maxwell's demon is said to violate the Second Law by separating fast- and slow-moving molecules; The Killer likewise separates men and women, striving to restore traditional gender distinctions left behind by a kind of historical entropy. The film's most famous image addresses the futility of this attempt: The Killer turns the gun on himself after murdering a woman teaching another class, and the camera looks on their bodies from above. The blood from their bodies meets in a shared pool, visually violating the impossible effort at separation that motivated the crime.

Polytechnique argues didactically against hegemonic masculinity. Beliefs in manly toughness and feminine passivity are refuted: Valérie displays fortitude and even incredible physical endurance, limping down a hallway, one leg shattered by a bullet, in search of help for other wounded classmates. And we see men as well as women being hurt by these gender norms. The "humiliation and shame" with which Villeneuve diagnoses Jean-François are ultimately fatal; even before listing his historical inspiration Sarto Blais among the victims of the massacre, *Polytechnique* leads us to that conclusion. Remaining in the building and undertaking futile efforts to help, Jean-François is arguably more courageous than the other men, who flee—and yet we are left to ask whether his suicide results from feeling emasculated. Even in 2009, when the film premiered, challenges to the manhood of the male Polytechnique students remained: political commentator Mark Steyn titled his review of the film "Excusing the men who ran away," reading the film as an apology for male cowardice [32]. The male students are compared unfavorably to the chivalrous male passengers of the *Titanic*, celebrated by Steyn for satisfying his nostalgic adherence to the patriarchal axiom "Women and children first" [32].

The character of Valérie also left some viewers unsatisfied—especially in the closing act, when we see her as a successful aeronautical engineer. Dubinsky archly but aptly describes the problems with this resolution:

> [A]t the end, she dissolves into one of the most banal clichés of our day: the woman who "has it all." She survives a massacre but is redeemed by her engineering job, snappy haircut, husband, and baby-to-be. She declares her intention to teach strength to her daughter and love to her son. I'm not one to spurn the happy ending, but can mass murder really be resolved by such a trite redemption story? [27]

While the film can be defended against these charges—Valérie is clearly still processing trauma despite her success, so the "happy ending" is not without nuance—Valérie's outcome indeed seems insufficient to the most troubling questions of hegemonic masculinity that resonate in the film. *Polytechnique* appeared in the era of incipient "girlboss" meritocracy, just before Sheryl Sandberg's 2013 *Lean In* and Sophia Amoruso's 2014 *#GIRLBOSS* celebrated the status of C-suite female executives as a triumph over the social forces that had held women back. Amanda Mull neatly encapsulates the problem here: "America's workplace problems don't begin and end with the identities of those atop corporate hierarchies—they're embedded in the hierarchies themselves. Making women the new men within corporations was never going to be enough to address systemic racism and sexism [or] the broad abuses of power that afflict the daily lives of most people" [33].

Polytechnique's coda is especially disappointing precisely because this difficulty runs deep in all accounts of the Montreal Massacre. One of the most scrutinized moments on December 6, 1989 occurred when Nathalie Provost tried to calm Lépine by explaining that studying engineering didn't make these women feminists. (Provost, who survived the attack, has subsequently embraced the label) [1]. Such a position anticipated 2010s "girlbosses": the professional ambition of a woman in engineering or in business appears to entail only a mild critique of the status quo, and female success can even suggest that these professions are finally fair and truly meritocratic. Indeed, this has already been a critical part of discussing December 6, 1989 in engineering education: teaching women about the massacre in 2006, Riley reports questions about whether "any woman trying to succeed [is] a feminist" and about the viability of a career mindset that we might call postfeminist [2] —trusting that the work of equity has progressed far enough.

In 1989, Nathalie Provost believed just this—that, in her words, "the fight to carve a place for women had already taken place" [1]. As recently as 2022, however, she reported receiving online abuse and even violent threats, largely in response to her long advocacy of gun control [34]. The National). Some may see these messages as mere trolling, especially when compared to the events of 1989, when Provost was shot four times. However, since 1989, the frequency of mass shootings too has increased significantly, "and there [remains] a disturbing connection between mass shootings and violence against women" [13]. Mass murderers are more likely to be male than other homicide perpetrators, and the victims of mass murder are more likely to be female [13].

In arguing for the development of empathy to combat the pervasive "culture of disengagement" [35] in engineering education, Walther et al. formulate what amounts to a mission for engineering educators. "[W]e have significant influence on…cultural elements, disciplinary narratives, and epistemological assumptions that so powerfully shape the meaning-contexts in which our students develop as engineers" [28]. Much of our collective work on culture and narrative can be positive not only in intent but in tone, promoting safety, belonging, and empowerment for women–indeed, for engineering students and educators of all gender identities. The Montreal Massacre and its film representations are instead frightening and perhaps depressing, especially within another historical moment of intense backlash against efforts to create justice and equity in and beyond engineering. Learning about it, however, allows our critical cognition and our felt engagement to operate in tandem. (In fact, art forms like film are so powerful in this regard that the word *empathy* entered English as a translation of *Einfühlung* ["feeling-into"], initially a description of aesthetic rather than interpersonal experience [29].) In the present historical moment, those faculties are as important as they have ever been.

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